

ROADSIDE OBSERVATION SURVEY

OF

SAFETY BELT USE IN INDIANA

Spring 2000

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The findings and conclusions in this report are solely those of the authors and do not necessarily reflect the views of The Governor's Council on Impaired & Dangerous Driving, the National Highway Traffic Safety Administration, or Purdue University.

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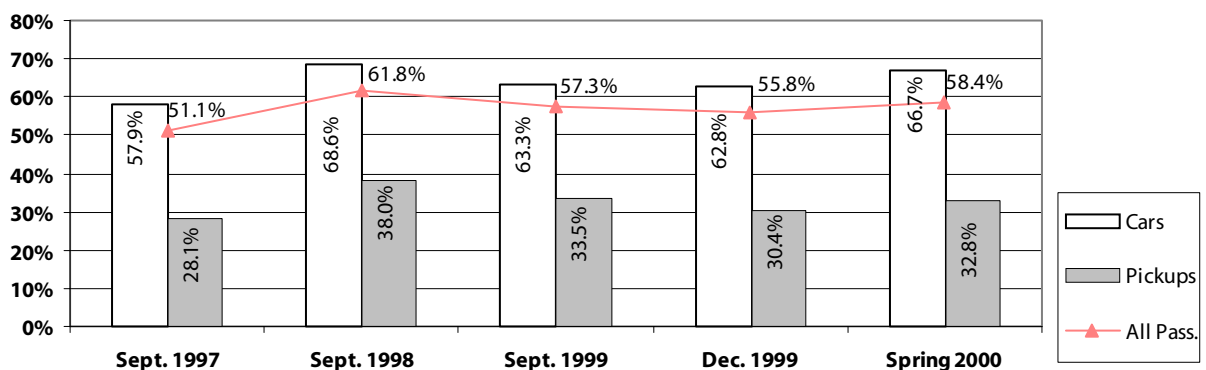
1.0 Executive Summary

This report summarizes the findings of the Spring 2000 Indiana roadside observation survey of safety belt use. The survey observations were collected during the months of May and June. The work of planning and conducting the survey was performed by the Purdue University Center for the Advancement of Transportation Safety (CATS), formerly Automotive Transportation Center (ATC). The Governor's Council on Impaired & Dangerous Driving and the National Highway Traffic Safety Administration (NHTSA) sponsored the survey.

This Spring 2000 report describes the twenty-fifth Indiana safety belt survey. This survey included a mini-survey using 103 of the sites used in the 1998 and 1999 surveys (versus the 161 sites surveyed in the annual report that is submitted to NHTSA).

This series of surveys has documented an increase in safety belt use by front-seat occupants of passenger vehicles on Indiana roadways, beginning with a use rate of less than 25% in 1985. The findings for the Spring 2000 Mini-survey as summarized in Figure 1 indicate that the usage rate for front-seat occupants of all passenger vehicles went from 57.3% in September of 1999 and 55.8% in December of 1999 to 58.4% during May/June of 2000. While the "all passenger vehicle" use rate has not yet returned to its high point in 1998 (61.8%), the passenger car usage rate (66.7%) is within two percentage points of the 1998 rate (68.6%). Unfortunately, the continued low usage rate of pickup truck occupants (32.8%) is compounded by the continued increased presence of pickup vehicles on the road. In 1998, pickup trucks represented 20.4% of the observed vehicles. In 1999, pickup trucks were 21.0% and in the spring 2000 survey, they again represented 21.0% of the observed vehicles on the roadways. On the other hand, passenger cars and minivans, both vehicles usually covered by the primary law, have gone from 69.6% (9/98) to 66.4% (9/99) to 65.5% of the total observed number of vehicles in the most recent survey. Sport-utility vehicles, which can be registered either as a truck or car, are the fastest-growing vehicle segment. This is significant in that a 90% seatbelt usage rate for only 65% of the observed vehicles and a 40% usage rate for the remaining 35% of the vehicles, results in an overall usage rate of only 72.5%, far below the nation's goal.

Figure 1: Safety Belt Usage Sept. 1997–Spring 2000



Female drivers continue to have higher usage rates (67.6%) than male drivers (50.4%). Likewise, the female passenger rate was 62.2% compared to 37.3% for male front-seat passengers. The young age group (ages 12-21) had much lower usage rates as either a driver (32.5%) or a front-seat passenger (30.8%).

Freeways had the highest usage rates of any roadway classification (77% for passenger cars—Figure 2). Freeway usage rates for pickup trucks continued to be below 50%. Rates were consistently higher for collector and local roads in urban areas versus rural areas. The lowest weighted usage rates were 22.8% for pickup trucks on rural collector roads and 17.4% for pickup truck occupants on rural local roads.

Statewide, the unweighted restraint usage rate for African-American front-seat occupants (648 observations) was 48.3% versus 57.1% for all other front-seat occupants (15,613 observations).

Data was also collected at an additional 42 sites located in eight higher population counties not included in the previous surveys. That data (in addition to the mini-survey sites that fall within the jurisdiction of the thirteen higher population counties) is summarized in a separate report. This will provide baseline data for the evaluation of Operation Pull Over's focus on Indiana's most urban counties in the upcoming year.

Table 1a: Safety Belt Usage Summary, Dec. 1999–Spring 2000

Vehicle Type	December 1999		Spring 2000		Relative Precision ³	Dec.-Spring Change in Weighted % Restrained
	Percent Restrained		Percent Restrained			
	Weighted	Unweighted	Weighted	Unweighted		
Cars	62.8%	62.7%	66.7%	64.8%	1.5%	3.9%
Pickups	30.4%	29.2%	32.8%	29.6%	3.8%	2.4%
All Passenger Vehicles (non-commercial)	55.8%	55.5%	58.4%	56.8%	1.4%	2.6%

Data obtained from roadside observation surveys conducted in December 1999 and Spring 2000.

Table 1b: Safety Belt Usage Summary, Sept. 1999–Spring 2000

Vehicle Type	September 1999		Spring 2000		Relative Precision ³	Sept.-Spring Change in Weighted % Restrained
	Percent Restrained		Percent Restrained			
	Weighted	Unweighted	Weighted	Unweighted		
Cars	63.3%	62.7%	66.7%	64.8%	1.5%	3.4%
Pickups	33.5%	30.4%	32.8%	29.6%	3.8%	-0.7%
All Passenger Vehicles (non-commercial)	57.3%	55.9%	58.4%	56.8%	1.4%	1.1%

Data obtained from roadside observation surveys conducted in September 1999 and Spring 2000.

¹ **Weighted Percentage Restrained:** Using the weighting procedure described in the 1998 Survey report, the Indiana estimates of vehicle miles traveled (VMT) by county and by roadway classification are used to adjust the Unweighted Percentage Restrained values to estimate the front-seat occupant percentage restrained values for all Indiana roads. The procedure used has been approved by NHTSA.

² **Unweighted Percentage Restrained:** Using all of the data from all data collection sites, the number of front-seat outboard occupants restrained divided by the sum of the number restrained and the number not restrained.

³ **Relative Precision:** The standard deviation of a statistical estimate (such as the percentage of front-seat occupants restrained) divided by the value of the estimate. The relative precision may be expressed as a percentage. For the annual safety belt survey report sent to NHTSA for the state, NHTSA regulations call for a relative precision less than 5 percent. The procedure and formulas for computing a standard deviation are found in the 1998 Survey report.

2.0 Survey Design

2.1 Introduction

The Spring 2000 Indiana Roadside Observation Survey of Safety Belt Use is the twenty-fifth in a series of surveys originally designed in 1985. The first through seventeenth surveys (1986 through 1993) were all conducted using a common protocol. In 1994, the survey was redesigned in conformance with guidelines published in the *Federal Register* [vol. 57, no. 125, June 2, 1992: 2889928904] by the National Highway Traffic Safety Administration; the revised design was discussed in the 1994 report (see also the 1998 report). For 1994 and earlier surveys, reporting was confined to passenger cars. In 1995, the survey was modified to permit reporting for a wider variety of vehicle types, including minivans, sport-utility vehicles and pickup trucks. Large passenger vans were included for the first time in the 1998 survey as required by new NHTSA regulations. In accordance with these new regulations, no distinction was made between in-state and out-of-state licensed vehicles. All vehicles identified as commercial were excluded.

The Spring 2000 mini-survey included 103 sites chosen from the 161 sites used in the September 1998 and September 1999 surveys.

2.2 Mini-survey Design

The Spring 2000 mini-survey used a proportional, random sample of the sites used for the 1998 and 1999 survey. The 1994 survey design called for eight roadway classes (four urban and four rural) and a classification of counties into three strata based on 1990 total Vehicle Miles Traveled (VMT) by county. Thus, there were three strata by eight roadway classes, or twenty-four cells in the sample design. The number of sites representing each cell varied, since the percentages of VMT accounted for by a roadway class within each stratum were unequal. Three of the cells in the sample design were represented by a single site. It was decided to retain these three sites in the mini-survey and randomly select 100 of the other 158 sites to maintain the same proportions of sites in each of the other 21 cells.

The desired number of sites for each cell was computed to maintain the same proportions as in the 1999 survey. A random number table was then used to select 100 sites from the 158. Once the desired number of sites for a cell had been chosen, additional choices that would belong to that cell were not accepted for the sample. While there was no requirement that all of the 24 counties represented in the 1994 survey design be included, at least one site from each of the counties was retained in the mini-survey. The number of sites by county in the 1998 and 1999 surveys and the mini-survey (**bold numbers**) was as follows:

2 Allen (14/9)	23 Fountain (5/2)	34 Howard (7/5)	56 Newton (4/4)
10 Clark (8/4)	24 Franklin (4/4)	36 Jackson (7/6)	62 Perry (4/1)
12 Clinton (5/2)	26 Gibson (5/4)	46 LaPorte (9/8)	64 Porter (12/7)
14 Daviess (5/4)	30 Hancock (7/5)	49 Marion (14/8)	69 Ripley (5/3)
16 Decatur (5/4)	32 Hendricks (8/5)	50 Marshall (5/4)	79 Tippecanoe (8/6)
17 DeKalb (5/2)	33 Henry (6/3)	55 Morgan (5/1)	80 Tipton (4/2)

Data were collected on all days of the week. The collection day and time used in 1998 and 1999 was retained whenever feasible. When scheduling constraints dictated a change in time or day, the proportions of sites assigned to weekend days, morning rush, evening rush and midday time periods were maintained. Observation sessions were evenly distributed during daylight hours (the time period between 6:30 a.m. and 6:30 p.m.); traffic was observed for exactly one-half hour (30 minutes) at each of the sites. Safety belt use

was recorded for front-seat outboard occupants only (driver and right front passenger, if present). The formulas used to estimate usage rates, standard deviations and relative precision for the Spring 2000 Mini-survey can be found in the 1998 report.

3.0 Results

Safety belt use presented in this report is based on the following raw data tallies:

Number/Percent of Vehicles Observed		Vehicle Type	Number of Occupants	
Mini-Survey	Percent of Total Vehicles		Mini-Survey	Number of Eligible Occupants
7,120	55.9%	passenger cars	9,245	9,097
2,671	21.0%	pickup trucks	3,402	3,332
1,224	9.6%	minivans	1,663	1,621
324	2.5%	large vans	429	418
1,400	11.0%	sport-utility vehicles	1,862	1,811
12,739	100.0%	total	16,601	16,279

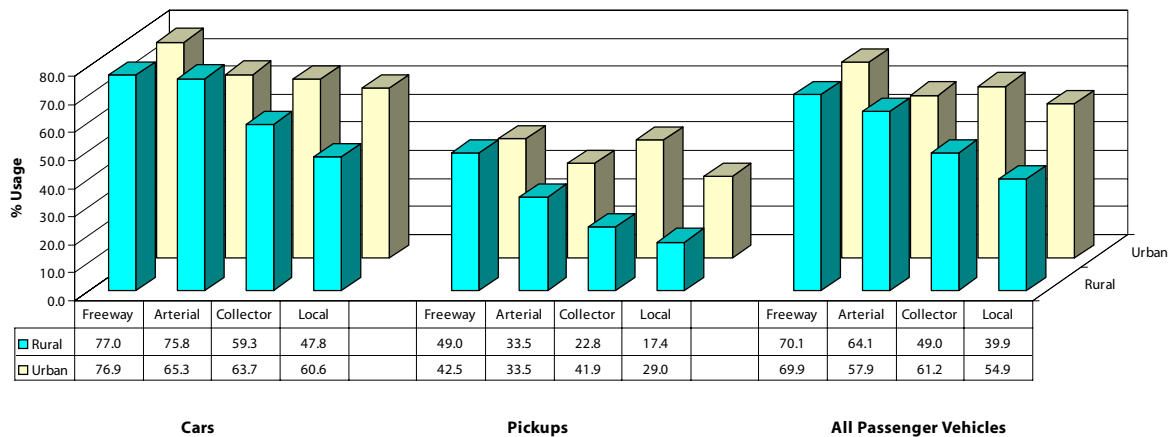
The number of occupants in the table above included all front-seat, outboard occupants except for children occupying a front-seat child safety seat in the observed vehicles. Usage rates are computed for “eligible occupants.” Occupants whose restraint usage was coded as unknown and children occupying a front-seat child safety seat were excluded from the eligible occupant counts. A total of seven children were observed occupying a front-seat child safety seat.

Although the total number of eligible occupants observed in the mini-survey declined from 37,370 in the September 1999 survey to 16,279 in Spring 2000, the relative precision estimates were very close to the estimates for the September 1999 data. While the relative precision estimates for cars increased from 1.4% to 1.5% and increased from 3.1% to 3.8% for pickups, the relative precision estimate for all passenger vehicles decreased slightly to 1.4% from 1.5% for the September 1999 survey. The original survey data are available through The Governor’s Council on Impaired & Dangerous Driving, Office of Traffic Safety.

3.1 Restraint Usage by Roadway Class

The design of Indiana’s survey in 1994 anticipated that safety restraint usage might vary depending on both the roadway classification and the degree of urbanization of the location. Low population or low Vehicle Miles Traveled (VMT) counties were not excluded from the sample of counties as permitted by NHTSA regulations nor were roadways outside the highway system excluded. Thus, Indiana’s survey analyzes restraint usage across all functional types of roadway. Figure 2 below displays the relationships for the Spring 2000 mini-survey between the weighted restraint usage roadway class and urbanization as quantified by total-county VMT. Overall, restraint usage rates were higher for all passenger vehicles in urban areas with the largest difference observed between local roads and streets (54.9% on urban local streets versus 39.9% on rural local roads). Freeways had the highest usage rates of any roadway class and rates varied little between rural (70.1%) and urban locations (69.9%) for all passenger vehicles. The decline in usage rates between September 1998 and Spring 2000 was small for freeway traffic (1.5% for rural freeways and 1.6% for urban freeways). On the other hand, the percentage restrained declined 8.2% on urban local streets but only 2.9% on local rural roads.

Figure 2: Spring 2000 Restraint Usage by Road Class



3.2 Restraint Usage by Gender and Role

The analysis of restraint usage patterns for drivers versus passengers and males versus females is based on unweighted usage rates and usage data from all Spring 2000 sites. As seen in Table 2, drivers overall had a higher unweighted usage rate of 57.7% compared to 53.5% for front-seat, outboard passengers. Female drivers had a 67.6% usage rate versus a 50.4% rate for male drivers and had higher rates for each vehicle type. Female passengers overall had a 62.2% usage rate, which was lower than the female driver rate but much higher than the male passenger rate of 37.3%. Note that 83.0% of pickup truck drivers were male and these male pickup drivers had only a 28.3% usage rate. Male pickup passengers had the lowest restraint usage rate of any subgroup (20.7%).

Table 2: Indiana Spring 2000 Unweighted Restraint Usage by Vehicle Type, Gender and Role

Vehicle Type	All Drivers				Front-Seat Passengers				Eligible Occupants
	R	NR	U	Percent Restrained	R	NR	U	Percent Restrained	Percent Restrained
Cars	4,676	2,379	65	66.3%	1,219	823	83	59.7%	64.8%
Pickups	784	1,845	42	29.8%	203	500	28	28.9%	29.6%
Minivans	850	355	19	70.5%	283	133	23	68.0%	69.9%
Large Vans	99	216	9	31.4%	39	64	2	37.9%	33.0%
SUV	854	526	20	61.9%	232	199	31	53.8%	60.0%
All Pass.	7,263	5,321	155	57.7%	1,976	1,719	167	53.5%	56.8%
Vehicle Type	Female Drivers				Female Front-Seat Passengers				Both
	R	NR	U	Percent Restrained	R	NR	U	Percent Restrained	Percent Restrained
Cars	2,502	1,105	14	69.4%	943	479	39	66.3%	68.5%
Pickups	133	194	1	40.7%	135	228	9	37.2%	38.8%
Minivans	490	173	4	73.9%	217	74	8	74.6%	74.1%
Large Vans	42	44	1	48.8%	26	30	0	46.4%	47.9%
SUV	422	205	6	67.3%	182	103	15	63.9%	66.2%
All Pass.	3,589	1,721	26	67.6%	1,503	914	71	62.2%	65.9%
Vehicle Type	Male Drivers				Male Front-Seat Passengers				Both
	R	NR	U	Percent Restrained	R	NR	U	Percent Restrained	Percent Restrained
Cars	2,162	1,271	14	63.0%	272	339	15	44.5%	60.2%
Pickups	651	1,651	12	28.3%	68	260	6	20.7%	27.3%
Minivans	357	179	2	66.6%	65	58	5	52.8%	64.0%
Large Vans	57	171	2	25.0%	11	32	0	25.6%	25.1%
SUV	429	320	5	57.3%	49	94	5	34.3%	53.6%
All Pass.	3,656	3,592	35	50.4%	465	783	31	37.3%	48.5%

Note: Drivers and passengers with unknown gender included in totals.

Legend: R= Restrained; NR=Not Restrained; U=Unknown Restraint; All Pass.=All non-commercial Passenger vehicles;

SUV=Sport Utility Vehicles

Additional analyses were performed on the data in this table to examine patterns in restraint usage by different gender pairings of front-seat occupants (see Figures 3 and 4). As seen in Figure 3, female drivers with no front-seat passengers had a usage rate of 68.1%. The female driver rate was 68.3% when there was a female front-seat passenger and 62.2% when accompanied by a male front-seat passenger. Male drivers, on the other hand, exhibited different rates depending on the presence and gender of a front-seat passenger. Male drivers with a female front-seat passenger had a 61.5% rate, much higher than the 40.2% rate found when accompanied by a male front-seat passenger. Male drivers with no front-seat passenger had a restraint usage rate of 48.0%—a rate midway between that observed with male and female front-seat passengers. Female occupants clearly have a positive impact on the use of safety restraints by male occupants.

As seen in Figure 4, female front-seat passengers riding alongside a male driver had a higher restraint rate (63.6%) than female passengers with a female driver (58.7%). Male passenger restraint usage was much more related to the gender of the driver. When the driver was female, the male passenger rate was 45.0%, but when the driver was male, the male passenger rate was only 31.6%.

Figure 3: Driver Usage by Gender and Driver/Passenger Category

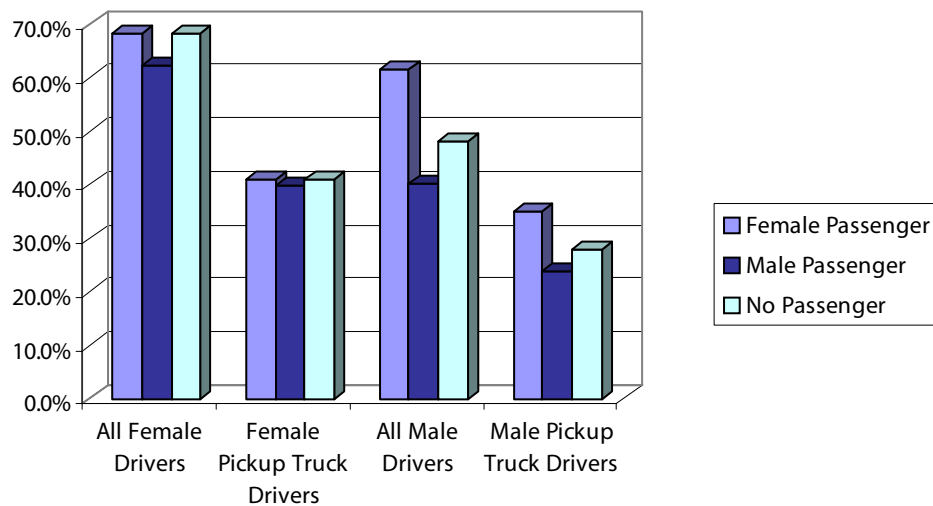
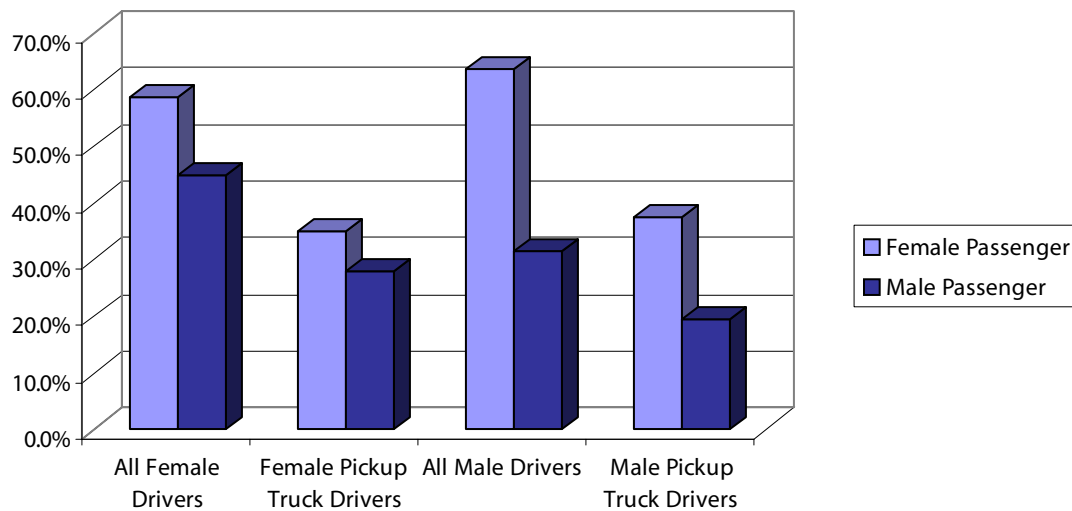


Figure 4: Passenger Usage by Gender and Driver/Passenger Category



As seen in Figure 3, drivers of pickup trucks (83% male) had very similar gender-pairing patterns as for all passenger vehicle occupants. Male pickup drivers have their lowest usage rates when traveling with another male. Male pickup passengers are also more likely to be belted if the driver is female rather than male.

3.3 Restraint Usage by Vehicle Type

When examined by vehicle type, the Spring 2000 data revealed that pickup truck occupants continue to present the least number of occupants restrained, compared to all other passenger vehicle occupants in restraint usage. For the mini-survey sites, only 32.8% (29.6% unweighted) of pickup occupants were belted (See Tables 1a and 1b). This may reflect the fact that these vehicles are still exempt from Indiana safety belt laws. Since pickup trucks comprised 21.0% of vehicles observed in the mini-survey, improvement in belt usage by pickup truck occupants would have significant potential for saving lives and reducing serious injuries.

As shown in Table 2 for the Spring 2000 mini-survey, the restraint usage rate for large van occupants continues to be only slightly higher (33.0% unweighted) than the rate for pickup occupants. While this is another area of concern, large vans comprised only 2.5% of vehicles observed in the Spring 2000 mini-survey.

Overall, safety belt usage rates for the other vehicle types were much higher. Minivan occupants once again exhibited the highest unweighted usage rate (69.9%), followed by car occupants (64.8%) and sport-utility vehicle occupants (60.0%). As was noted in the September 1999 study, the difference in usage by occupants of sport-utility vehicles and pickup trucks is remarkable because these vehicles are often very similar in size and use. As previously noted, some of this difference may be attributed to the very high percentage of male pickup truck drivers; however, most of the difference is attributable to the exclusion of pickups from the Indiana restraint laws.

3.4 Restraint Usage by Age of Drivers and Passengers

In the September surveys of 1998 and 1999, judgments of the ages of drivers and passengers were coded using three groups for children and three groups for age 16 and above. Observers reported that making age judgments regarding young children was problematic and the percentage of occupants judged to be in the ages 16-34 category varied considerably between observers. It was also felt that the usage rates for both teenage drivers and passengers have been lower than for any other age group. Including young teens with children age 6 and older and older teens with young adults up to age 34 prevented CATS from using the annual survey to track trends in teenage restraint rates.

The observation protocol was changed for this survey to code age only if the observer judged the occupant to be a *child* (under age 12) or *young* (ages 12-21). Age 12 was chosen as the lower bound for the *young* or teenage group since Indiana's current Child Safety Restraint law covers children through age 11. Coding "age" only for child and young occupants reduced the average time needed to code the information for a vehicle, thus increasing the number of observations for high-volume sites.

Of the 856 young drivers observed (driving alone or with young passengers), only 32.6% were using a safety belt and only 26.8% of the 306 young passengers (accompanying young drivers) were restrained. Young female drivers (355 observations) had a higher usage rate (37.2%) than young male drivers (30.1% of 522 observations). The patterns of restraint use by young driver/passenger gender combination (Figures 5 and 6) were quite different than for all drivers and passengers (Figures 3 and 4). Both young male and young female passengers had higher usage rates (37.1% for young males and 47.2% of young females) when riding with an older driver. Young male passengers riding with a young female driver had an alarmingly low usage rate of 4.2%.

Young drivers and young passengers, both male and female, are simply not getting the message that wearing seat belts can save lives and their lack of understanding has the effect of lowering the overall restraint usage rate in Indiana by approximately 2.5%.

The restraint usage rate for the 290 observed child occupants restrained in a child safety seat was only 35.5%—well below the 53.5% usage rate for all passengers.

Figure 5: Young Drivers by Gender and Driver-Passenger Category

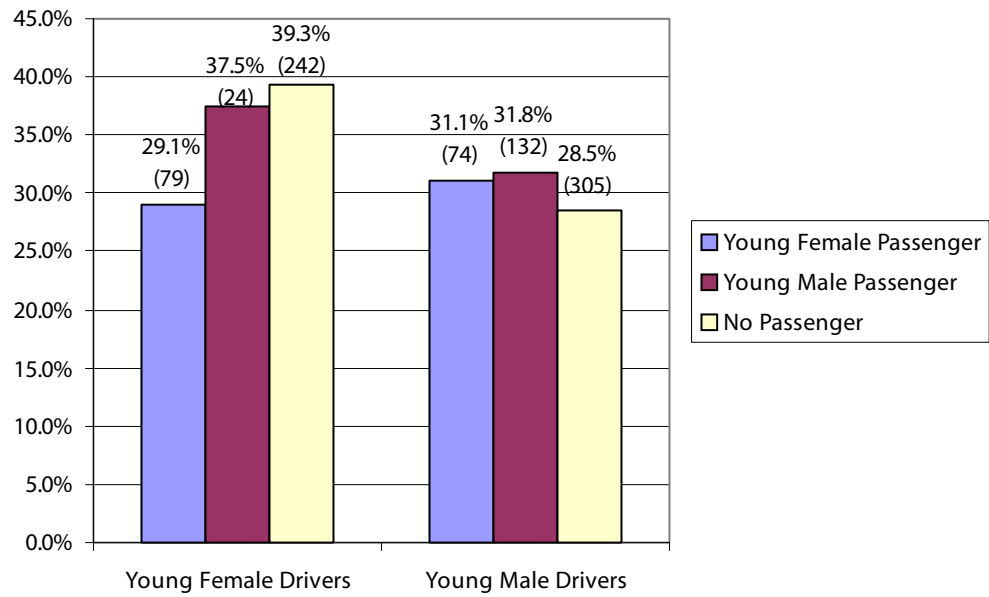
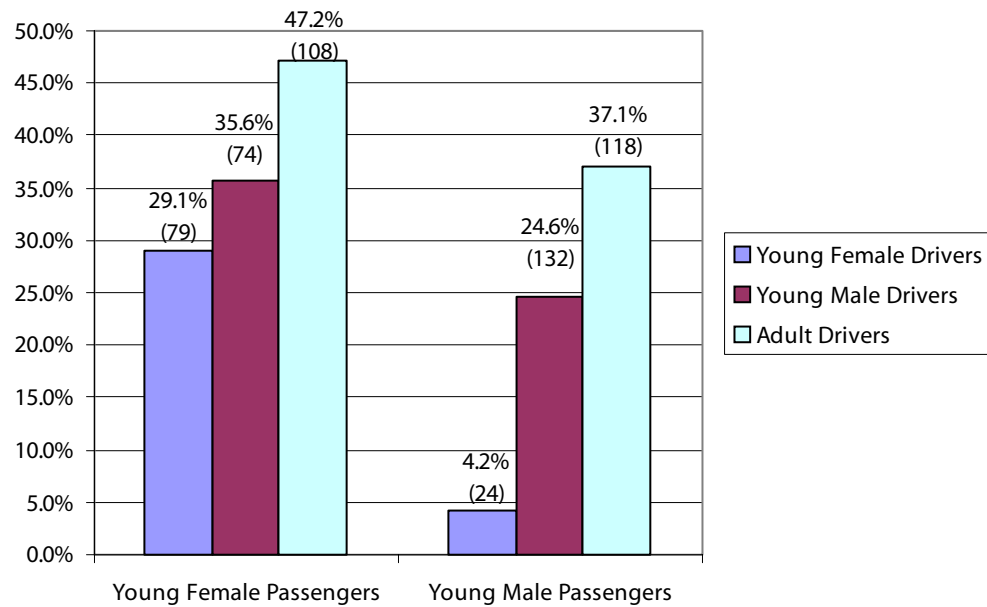


Figure 6: Young Passengers by Gender and Driver-Passenger Category



3.5 Restraint Usage by Race of Drivers and Passengers

This was the initial Indiana survey for which coding the race of front-seat occupants was included for each of the sites. The only racial group for which data was systematically coded was for African-Americans. Statewide, the unweighted restraint usage rate for African-American eligible occupants (648 observations) was 48.3% versus 57.1% for all other eligible occupants. The largest gap in restraint usage rates occurred for passengers in cars (35.3% for African-American versus 61.2% for non-African-American). The restraint usage rate for African-American car drivers was 51.9% versus 67.1% for non-African-American drivers. Usage rate differences were not significant in the other vehicle categories.

4.0 Conclusions and Recommendations

The primary findings of the 1998 safety belt survey were that the Indiana usage rate increased by more than ten percent from 51.1% in 1997 to 61.8% in 1998. Unfortunately, approximately half of these gains were lost in 1999. Both the December 1999 and the Spring 2000 surveys add confirming evidence that the restraint usage rate for Indiana motorists did in fact slip from the all-time high rates observed during September 1998. However, the Spring 2000 survey did show significant improvement for occupants of cars and minivans. Unfortunately, these vehicles, while still representing a majority of the observed vehicles, dropped to 65.5% of the observed vehicles. Pickup truck usage rates continue to be very low, and when coupled with a gradual growing presence of these vehicles, a significant impact on the overall usage of restraint systems in Indiana can be anticipated. Young occupants and their low restraint usage rate have the effect of lowering the state average by approximately 2.5%.

Operation Pull Over and its continued support by the Governor's Council is essential. The Council's program to emphasize additional funding in the largest population areas will be tracked in parallel with the statewide safety belt usage rates. The continued collection of safety belt data three times during the course of each year will provide quicker feedback and a better evaluation tool to measure both statewide and the "Big City/Big County" initiative results.

Education and enforcement efforts need to be targeted at those segments of the population that have demonstrated low usage rates. These include teens, the African-American community, and occupants of large vans and pickup trucks. Public information and education should be aimed at part-time users such as males, teenagers and rural residents. More enforcement should be targeted at drivers traveling on local roads and rural collectors.

It is recommended that the state amend the current safety belt law to apply it to the occupants of pickups and other vehicles currently licensed as light trucks. Improving usage rates of occupants of these vehicles to that of passenger cars would increase the overall usage rates by seven to eight percent. The distinctively lower usage rates for male drivers and male front-seat passengers when riding together should be further studied. This difference could possibly be utilized in targeting media messages to high-risk male occupants.

Strict enforcement of the Indiana Child Restraint Law and the Graduated License Law (zero tolerance) should help in increasing the usage rates of children and teenagers. It is recommended that focused data collection efforts be further increased to monitor the safety restraint usage of these age groups. Such data would be useful in evaluating the effects of these laws on saving young lives and reducing injuries.

5.0 References

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Mitter, Eric L.; James, Dwayne S.; Cornwell, J. Philip; Besel, Ronald R. "Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana: August, 1994," Indiana University Transportation Research Center and Purdue University Automotive Transportation Center, November 1994.

APPENDIX: SITE DATA SUMMARY TABLES

The following abbreviations and code values are used in the following table:

Rd Gr	Road Group: the 4 Urban and 4 Rural road groups 1-Rural Freeway 2-Rural Arterial 3-Rural Collector 4-Rural Local 5-Urban Freeway 6-Urban Arterial 7-Urban Collector 8-Urban Local
Rd Cl	Roadway Classification – the 12 FHWA roadway functional classes 1-Rural Freeway 2-Rural Principal Arterial 6-Rural Minor Arterial 7-Major Rural Collector 8-Minor Rural Collector 9-Rural Local Streets and Roads 11-Urban Freeway 12-Other Freeways and Expressways 14-Urban Principal Arterial 16-Urban Minor Arterial 17-Urban Collector 19-Urban Local Streets and Roads
SITE	Site code: County Number – site number
DAY	Day of week
TIME	Time of day in local military time for start of observations
R	Restrained: shoulder strap observed to be used
NR	Not-restrained: shoulder strap observed to be unused
U	Restraint usage unknown or not observable
C	Passenger cars/station wagons
T	Non-commercial pickup trucks
MV	Non-commercial minivans
V	Non-commercial large vans
SUV	Non-commercial sport utility vehicles
1-Hr. TOT	Total non-commercial traffic volume for a one-hour observation period

Spring 2000 Mini-survey Seatbelt Site Data by Vehicle Type, Strata and Roadway Classification

Rd Rd						CARS				TRUCKS				MINIVANS				LARGE VANS				SPORT UTILITY VEH.				All VEH.	Vehicle Counts						1-Hr.
Strata	Gr	Cl	SITE	DAY	TIME	R	NR	U	% R	R	NR	U	% R	R	NR	U	% R	R	NR	U	% R	R	NR	U	% R	%R	C	T	MV	LV	SUV	TOT	TOT
1	1	1	02-15	Fri	8:36	27	5	2	84.4%	9	7	2	56.3%	6	0	0	100.0%	3	0	0	100.0%	9	1	0	90.0%	80.6%	30	14	5	2	9	60	120
1	1	1	46-05	Sun	7:15	15	11	2	57.7%	8	3	0	72.7%	0	2	1	0.0%	0	0	0	NA	2	0	1	100.0%	61.0%	21	7	3	0	3	34	68
1	1	1	46-08	Sun	9:30	47	11	5	81.0%	8	1	1	88.9%	5	2	0	71.4%	0	2	1	0.0%	5	1	0	83.3%	79.3%	41	7	4	2	5	59	118
1	2	6	46-03	Sat	17:00	67	34	0	66.3%	16	21	1	43.2%	9	4	0	69.2%	3	2	0	60.0%	17	6	0	73.9%	62.6%	59	29	7	3	12	110	312
1	2	6	46-11	Sat	15:50	82	35	0	70.1%	13	7	0	65.0%	5	2	0	71.4%	2	1	0	66.7%	14	4	0	77.8%	70.3%	79	14	5	2	12	112	516
1	2	6	64-03	Thur	8:20	71	20	2	78.0%	11	11	0	50.0%	7	0	3	100.0%	1	0	1	100.0%	13	2	2	86.7%	75.7%	82	21	9	2	14	128	318
1	3	7	02--01	Fri	7:55	31	4	1	88.6%	1	5	0	16.7%	12	0	0	100.0%	1	1	0	50.0%	3	0	1	100.0%	82.8%	31	4	8	2	4	49	98
1	3	7	02--04	Fri	15:30	36	8	1	81.8%	9	21	0	30.0%	1	1	0	50.0%	0	4	0	0.0%	4	3	0	57.1%	57.5%	35	24	2	3	5	69	138
1	3	7	64-11	Thur	13:30	47	34	2	58.0%	8	22	5	26.7%	12	4	2	75.0%	0	0	0	NA	16	3	0	84.2%	56.8%	65	31	15	0	12	123	246
1	4	9	46-01	Fri	8:00	25	28	2	47.2%	9	23	0	28.1%	7	3	0	70.0%	3	4	0	42.9%	9	6	0	60.0%	45.3%	48	26	8	6	15	103	206
1	5	11	02-08	Sat	12:10	70	13	3	84.3%	11	18	0	37.9%	17	3	0	85.0%	0	3	0	0.0%	19	4	1	82.6%	74.1%	64	19	14	2	17	116	330
1	5	11	02-09	Sat	9:25	116	33	2	77.9%	21	27	1	43.8%	42	2	1	95.5%	7	13	0	35.0%	46	18	1	71.9%	71.4%	108	37	29	14	45	233	672
1	5	11	49-08	Tues	9:30	39	12	0	76.5%	9	13	0	40.9%	10	4	0	71.4%	2	4	0	33.3%	5	0	0	100.0%	66.3%	42	18	9	6	4	79	158
1	5	11	49-09	Tues	13:35	107	49	2	68.6%	13	32	0	28.9%	12	8	3	60.0%	1	7	0	12.5%	17	6	1	73.9%	59.5%	125	38	17	8	21	209	708
1	5	11	64-04	Sun	10:00	101	17	3	85.6%	25	3	4	89.3%	25	3	1	89.3%	5	1	1	83.3%	21	6	0	77.8%	85.5%	80	21	18	4	18	141	486
1	6	14	02-10	Sat	10:30	119	55	4	68.4%	29	30	2	49.2%	13	11	1	54.2%	0	1	0	0.0%	19	11	1	63.3%	62.5%	127	44	19	1	23	214	1620
1	6	14	46-06	Sun	8:20	30	48	4	38.5%	6	10	1	37.5%	10	5	1	66.7%	4	4	0	50.0%	5	5	0	50.0%	43.3%	64	15	10	5	7	101	202
1	6	14	46-10	Fri	9:20	81	15	0	84.4%	5	24	1	17.2%	8	4	1	66.7%	0	0	0	NA	7	7	1	50.0%	66.9%	70	24	10	0	10	114	330
1	6	14	49-05	Mon	17:05	142	47	1	75.1%	12	37	0	24.5%	17	9	0	65.4%	0	2	0	0.0%	15	11	0	57.7%	63.7%	160	43	22	2	21	248	2394
1	6	14	49-06	Mon	13:30	95	110	2	46.3%	5	21	1	19.2%	13	2	0	86.7%	1	10	0	9.1%	16	18	0	47.1%	44.7%	159	24	12	8	27	230	1716
1	6	14	64-06	Thur	15:10	46	22	0	67.6%	21	19	0	52.5%	14	0	0	100.0%	3	0	0	100.0%	13	5	0	72.2%	67.8%	51	30	9	2	12	104	834
1	6	16	02-16	Fri	12:30	89	48	4	65.0%	11	15	2	42.3%	14	6	0	70.0%	4	3	2	57.1%	14	7	2	66.7%	62.6%	111	23	16	6	17	173	660
1	6	16	49-10	Tues	8:00	85	43	0	66.4%	6	38	0	13.6%	12	2	0	85.7%	0	8	0	0.0%	14	14	1	50.0%	52.7%	115	38	12	7	24	196	672
1	6	16	64-05	Sun	12:25	64	22	8	74.4%	5	11	2	31.3%	10	1	0	90.9%	3	0	0	100.0%	25	5	3	83.3%	73.3%	62	13	7	2	20	104	300
1	7	17	02-14	Fri	10:25	72	35	0	67.3%	6	6	0	50.0%	14	6	1	70.0%	1	1	0	50.0%	8	8	0	50.0%	64.3%	90	12	17	2	11	132	300
1	7	17	46-02	Thur	6:45	6	2	0	75.0%	1	1	0	50.0%	0	1	0	0.0%	0	0	0	NA	2	2	0	50.0%	60.0%	8	2	1	0	4	15	30
1	7	17	49-12	Mon	17:30	132	55	1	70.6%	10	7	0	58.8%	31	6	0	83.8%	1	3	0	25.0%	36	9	0	80.0%	72.4%	151	12	28	3	38	232	594
1	8	19	02-12	Fri	7:00	20	14	1	58.8%	4	1	1	80.0%	7	4	1	63.6%	0	2	0	0.0%	2	1	0	66.7%	60.0%	29	5	8	2	3	47	94
1	8	19	49-13	Tues	15:00	24	9	1	72.7%	3	7	0	30.0%	4	3	1	57.1%	0	0	0	NA	0	0	0	NA	62.0%	32	8	6	0	0	46	92
1	8	19	49-15	Mon	12:30	75	52	3	59.1%	3	7	1	30.0%	5	9	0	35.7%	0	11	0	0.0%	4	6	0	40.0%	50.6%	112	9	11	9	8	149	318
1	8	19	64-12	Thur	11:40	31	28	1	52.5%	2	14	1	12.5%	14	3	0	82.4%	2	1	0	66.7%	9	7	0	56.3%	52.3%	51	14	15	3	14	97	194
1	8	19	64-13	Thur	10:00	17	11	0	60.7%	1	1	0	50.0%	3	0	0	100.0%	1	3	0	25.0%	2	1	0	66.7%	60.0%	21	2	2	3	2	30	60
2	1	1	30-01	Tues	15:45	105	17	0	86.1%	30	26	0	53.6%	24	6	0	80.0%	2	5	0	28.6%	12	5	1	70.6%	74.6%	110	53	26	6	18	213	840
2	1	1	33-01	Sat	13:30	39	27	0	59.1%	6	11	3	35.3%	16	6	0	72.7%	1	1	0	50.0%	11	7	0	61.1%	58.4%	40	14	14	1	9	78	156
2	1	1	79-06	Tues	12:30	99	30	3	76.7%	12	24	4	33.3%	17	7	0	70.8%	3	4	0	42.9%	24	7	0	77.4%	68.3%	99	33	21	4	24	181	384
2	2	2	32-01	Mon	10:30	84	22	0	79.2%	14	38	0	26.9%	15	9	1	62.5%	5	5	0	50.0%	12	5	2	70.6%	62.2%	89	44	17	6	14	170	340
2	2	2	33-03	Sat	12:30	90	55	0	62.1%	13	67	0	16.3%	17	11	0	60.7%	0	6	0	0.0%	24	10	0	70.6%	49.1%	96	56	21	5	21	199	684
2	2	2	50-02	Sat	15:10	101	20	2	83.5%	15	17	0	46.9%	18	2	1	90.0%	2	4	1	33.3%	22	3	2	88.0%	77.5%	82	19	13	5	16	135	858
2	2	6	34-06	Thur	15:00	63	28	5	69.2%	11	17	1	39.3%	15	3	1	83.3%	2	4	1	33.3%	15	7	0	68.2%	64.2%	74	27	16	4	18	139	402
2	2	6	79-07	Wed	7:																												

Spring 2000 Mini-survey Seatbelt Site Data by Vehicle Type, Strata and Roadway Classification

Rd Rd		CARS				TRUCKS				MINIVANS				LARGE VANS				SPORT UTILITY VEH.				All VEH.	Vehicle Counts						1-Hr.				
Strata	Gr	Cl	SITE	DAY	TIME	R	NR	U	% R	R	NR	U	% R	R	NR	U	% R	R	NR	U	% R	%R	C	T	MV	LV	SUV	TOT	TOT				
2	5	11	30-03	Tues	8:50	66	15	1	81.5%	7	10	0	41.2%	15	3	0	83.3%	0	2	0	0.0%	8	2	0	80.0%	75.0%	75	13	14	1	8	111	222
2	5	11	79-04	Wed	10:45	66	26	0	71.7%	3	19	0	13.6%	23	5	0	82.1%	3	1	0	75.0%	13	6	1	68.4%	65.5%	74	16	22	3	16	131	262
2	6	14	32-04	Mon	8:15	56	25	2	69.1%	19	39	0	32.8%	12	3	2	80.0%	0	3	0	0.0%	14	7	1	66.7%	56.7%	68	47	12	2	17	146	306
2	6	14	34-05	Thur	10:30	82	42	3	66.1%	20	32	0	38.5%	17	6	1	73.9%	1	1	0	50.0%	20	13	2	60.6%	59.8%	95	42	18	2	27	184	1314
2	6	16	10-02	Sat	9:35	121	36	0	77.1%	21	26	0	44.7%	21	11	0	65.6%	1	5	0	16.7%	8	21	0	27.6%	63.5%	113	38	20	3	19	193	720
2	6	16	50-03	Fri	12:00	79	39	1	66.9%	11	24	0	31.4%	20	16	0	55.6%	3	5	1	37.5%	5	10	0	33.3%	55.7%	91	27	27	6	11	162	414
2	7	17	32-08a	Sun	12:00	43	12	3	78.2%	5	13	0	27.8%	9	1	0	90.0%	2	0	0	100.0%	15	3	0	83.3%	71.8%	39	14	7	1	11	72	144
2	7	17	34-01	Thur	13:40	61	60	1	50.4%	13	19	0	40.6%	7	10	0	41.2%	1	1	0	50.0%	5	4	0	55.6%	48.1%	93	28	14	2	6	143	286
2	8	19	10-08	Sat	11:50	20	24	0	45.5%	4	11	0	26.7%	6	1	0	85.7%	0	2	0	0.0%	2	5	0	28.6%	42.7%	32	14	6	2	6	60	120
2	8	19	30-06	Tues	12:20	51	34	1	60.0%	5	15	0	25.0%	10	11	0	47.6%	1	2	0	33.3%	15	4	0	78.9%	55.4%	72	18	17	3	14	124	270
2	8	19	55-05	Mon	14:45	73	57	1	56.2%	7	25	1	21.9%	14	8	0	63.6%	0	4	0	0.0%	20	15	1	57.1%	51.1%	106	31	19	3	29	188	858
2	8	19	79-08	Tues	7:30	41	21	0	66.1%	4	14	1	22.2%	10	9	0	52.6%	1	0	0	100.0%	3	5	0	37.5%	54.6%	49	16	13	1	7	86	172
2	8	19	79-09	Tues	15:45	179	42	0	81.0%	16	20	0	44.4%	32	4	1	88.9%	5	2	0	71.4%	31	11	0	73.8%	76.9%	187	31	30	7	37	292	828
3	1	1	16-02	Sat	9:00	74	18	10	80.4%	5	12	1	29.4%	20	1	2	95.2%	0	1	0	0.0%	5	3	1	62.5%	74.8%	62	13	13	1	6	95	190
3	1	1	23-02	Mon	15:30	42	31	2	57.5%	12	21	0	36.4%	3	0	1	100.0%	0	0	0	NA	2	4	0	33.3%	51.3%	59	24	3	0	6	92	184
3	1	1	26-01	Thur	15:30	59	10	0	85.5%	15	24	0	38.5%	10	1	0	90.9%	0	0	1	NA	7	5	0	58.3%	69.5%	55	32	11	1	8	107	294
3	1	1	69-04	Fri	10:30	49	17	3	74.2%	13	13	1	50.0%	20	4	2	83.3%	3	6	0	33.3%	20	5	3	80.0%	70.0%	53	18	17	6	20	114	240
3	2	2	17-04	Sat	8:00	60	35	0	63.2%	19	42	0	31.1%	10	11	0	47.6%	1	4	0	20.0%	14	18	2	43.8%	48.6%	77	47	14	4	23	165	354
3	2	2	24-02	Fri	14:45	96	88	0	52.2%	30	83	0	26.5%	9	19	0	32.1%	4	16	0	20.0%	19	37	1	33.9%	39.4%	135	85	19	15	40	294	1050
3	2	2	26-02	Thur	10:00	124	23	5	84.4%	17	27	0	38.6%	11	2	0	84.6%	4	7	0	36.4%	15	2	0	88.2%	73.7%	104	36	9	9	14	172	492
3	2	2	56--02	Sun	15:40	41	24	1	63.1%	9	9	1	50.0%	11	1	1	91.7%	0	0	0	NA	9	2	0	81.8%	66.0%	47	13	9	0	7	76	240
3	2	2	80-02	Thur	7:25	101	19	0	84.2%	19	27	1	41.3%	13	3	1	81.3%	3	3	0	50.0%	29	3	0	90.6%	75.0%	111	36	14	4	28	193	2094
3	2	6	12-04	Tues	14:15	88	39	2	69.3%	18	45	0	28.6%	14	9	0	60.9%	1	1	0	50.0%	7	9	0	43.8%	55.4%	95	49	16	2	12	174	396
3	3	7	14-01	Wed	13:45	39	40	0	49.4%	11	56	5	16.4%	5	1	0	83.3%	4	3	0	57.1%	3	10	0	23.1%	36.0%	61	57	6	5	11	140	280
3	3	7	16-03	Sat	8:00	64	43	3	59.8%	21	67	3	23.9%	16	7	1	69.6%	4	4	0	50.0%	14	14	0	50.0%	46.9%	82	70	15	5	21	193	386
3	3	7	24-01	Fri	14:00	34	31	0	52.3%	7	25	1	21.9%	6	5	0	54.5%	0	2	0	0.0%	5	4	0	55.6%	43.7%	55	25	9	1	7	97	194
3	3	7	36-01	Thur	12:15	60	54	0	52.6%	7	34	1	17.1%	1	6	0	14.3%	2	2	0	50.0%	6	6	0	50.0%	42.7%	90	37	5	4	11	147	294
3	3	7	36-05	Thur	15:00	12	16	0	42.9%	8	28	1	22.2%	3	3	0	50.0%	0	1	0	0.0%	4	1	0	80.0%	35.5%	22	28	4	1	4	59	118
3	3	7	56-03	Sun	14:45	44	43	5	50.6%	15	35	4	30.0%	9	1	2	90.0%	2	2	0	50.0%	4	5	1	44.4%	46.3%	58	35	9	3	7	112	224
3	3	7	69-02	Fri	9:30	89	63	1	58.6%	9	51	0	15.0%	13	6	0	68.4%	3	3	0	50.0%	13	26	1	33.3%	46.0%	124	50	16	6	29	225	492
3	3	8	14-05	Wed	15:30	14	18	0	43.8%	6	18	1	25.0%	4	4	0	50.0%	3	2	0	60.0%	10	9	1	52.6%	42.0%	25	20	6	3	15	69	138
3	3	8	16-04	Sat	10:30	14	12	1	53.8%	0	7	0	0.0%	1	2	0	33.3%	0	0	0	NA	5	1	0	83.3%	47.6%	17	4	2	0	5	28	56
3	3	8	24-03	Fri	15:45	14	28	0	33.3%	9	22	0	29.0%	2	2	0	50.0%	0	4	0	0.0%	5	6	0	45.5%	32.6%	31	24	3	2	7	67	134
3	3	8	36-06	Sat	13:45	7	12	0	36.8%	3	22	2	12.0%	6	4	0	60.0%	0	0	0	NA	0	8	0	0.0%	25.8%	13	19	8	0	5	45	90
3	4	9	16-05	Fri	7:30	12	16	0	42.9%	2	28	0	6.7%	3	4	0	42.9%	0	3	0	0.0%	2	5	0	28.6%	25.3%	24	25	6	2	7	64	128
3	4	9	23-06	Mon	13:30	14	23	1	37.8%	4	20	0	16.7%	0	3	0	0.0%	1	5	0	16.7%	0	7	0	0.0%	24.7%	31	17	2	4	6	60	120
3	4	9	24-04	Fri	17:00	38	21	0	64.4%	4	27	0	12.9%	8	2	0	80.0%	0	0	0	NA	2	10	0	16.7%	46.4%	49	24	8	0	8	89	178
3	4	9	26-05	Thur	14:30	32	12	1	72.7%	9	23	0	28.1%	4	7	0	36.4%	3	2	1	60.0%	6	3	0	66.7%	53.5%	34	26	10	4	9	83	166
3	4	9	36-07	Sat	14:45	12	18	0	40.0%	1	19	1	5.0%	3	4	1	42.9%	0	0	0	NA	2	4	0	33.3%	28.6%	22	15	6	0	5	48	96
3	4	9	56-01	Fri	16:45	29	41	1	41.4%	3	9	0	25.0%	4	8	0	33.3%	0	1	0	0.0%	1	9	0	10.0%	35.2%	50	10	8	1	7	76	152
3	4	9	56-04	Fri	17:40	27	78	1	25.7%	11	26	0	29.7%	8	15	0	34.8%	1	2	0	33.3%	11	20	1	35.5%	29.1%	75	30	16	3	24	148	296
3	4	9	69-03	Fri	11:45	43	41	1	51.2%	5	35	1	12.5%	14	10	0	58.3%	2	2	0	50.0%	6	23	0	20.7%	38.7%	75	30	18	4	22	149	298
3	4	9	80-01	Thur	8:20	37	27	2	57.8%	2	10	0	16.7%	2	2	0	50.0%	1	4	0	20.0%	4	5	0	44.4%	48.9%	54	11	4	4	7	80	160
3	5	11	36-02	Thur	10:45	32	6	0	84.2%	4	9	0	30.8%	4	1	0	80.0%	3	2	0	60.0%	5	1	0	83.3%	71.6%	29	11	3	3	4	50	100
3	6	14	36-03	Thur	13:50	108	60	1	64.3%	14	47	0	23.0%	23	9	0	71.9%	0	6	0	0.0%	18	11	1	62.1%	55.1%	142	53	25	5	22	247	660
3	6	16	14-02	Wed	17:20	71	83	2	46.1%	9	65	0	12.2%	27	4	3	87.1%	0	3	0	0.0%	20	17	2	54.1%	42.5%	119	57	23	2	28	229	978
3	6	16	26-03	Thur	12:30	73	63	1	53.7%	16	50	0	24.2%	17	8	0	68.0%	0	2	0	0.0%	13	10	1	56.5%	47.2%	110	51	16	2	17	196	450
3	7	17	12--01	Wed	9:25	84	81	2	50.9%	4	40	1	9.1%	10	12	0	45.5%	0	9	0	0.0%	1	9	0	10.0%	39.6%	124	38	18	7			

